

Date: Monday, 19/01/2009 2:06:36 PM  
 User: Julie Dawson

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: HANDLE WELDMENT
Job Number	: 44900		
Estimate Number	: 12034		
P.O. Number	:	Part Number	: D33555
This Issue	: 19/01/2009 S.O. No. :	Drawing Number	: D3355 REV.B
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : LARGE FAB ASSY	Drawing Revision	: B
Previous Run	: 44252	Material	:
Written By	:	Due Date	: 30/01/2009 Qty: 4 Um: Each
Checked & Approved By	: <u>JUD 09.01.20</u>		
Comment	: est rev A 06.01.19 new issue EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M1018TR1250W120	round tubing 1.250x .120w
-----	-----------------	---------------------------



Comment: Qty.: 2.5830 f(s)/Unit Total: 10.3320 f(s)

AISI 1018-1025 mild steel seamless round tubing

1.250" od X 0.120" wall batch: 4105645

28/09/01/09

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW

Cut blank 28.250" long

28/09/01/09

3.0	MILLING CONV.	CONVENTIONAL MILLING MACHINE
-----	---------------	------------------------------



Comment: CONVENTIONAL MILLING MACHINE

1- Drill & c'sink as per dwg D3355

2-Deburr as per dwg D3355

PTD

28/09/01/09

4.0	QC5	INSPECT WORK TO CURRENT STEP
-----	-----	------------------------------



Comment: INSPECT WORK TO CURRENT STEP

20/09/01/09 (40)

5.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: Curf


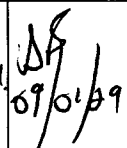

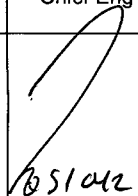
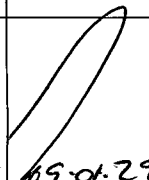
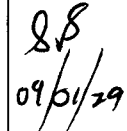

9/11/30

(42)

SP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3355-5 PAR #: N/A Fault Category: Prod/Machined Part NCR: (Yes) No DQA: D Date: 09/02/03  
D3355-041 D3355-041 D206-731-011  
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: D Date: 09/02/03

NCR: <u>44900</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
09-01-29	1.0	1.5 OD material was used for Qty 4 parts, and me Scrap.  R.C: Employee did not follow UO or Draw instructions. L.O.A.		Scrap Qty 4 parts, - Replace with correct mat'l - Ensure employee double checks & measures mat'l prior to use.	 09/01/29	 09/01/29	 05/01/29	 09-01-29
		R.C. I pick the wrong Material By error. Lack of Attention.		Replace Batch # M105645 AISI 1045-1045	 09/01/29	 09/01/29		

NOTE: Date &amp; initial all entries

Date: Monday, 19/01/2009 2:06:36 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: HANDLE WELDMENT

Job Number: 44900

Part Number: D33555

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC21

FINAL INSPECTION/W/O RELEASE



09/02/02 JF

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 09-02-02

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



2000

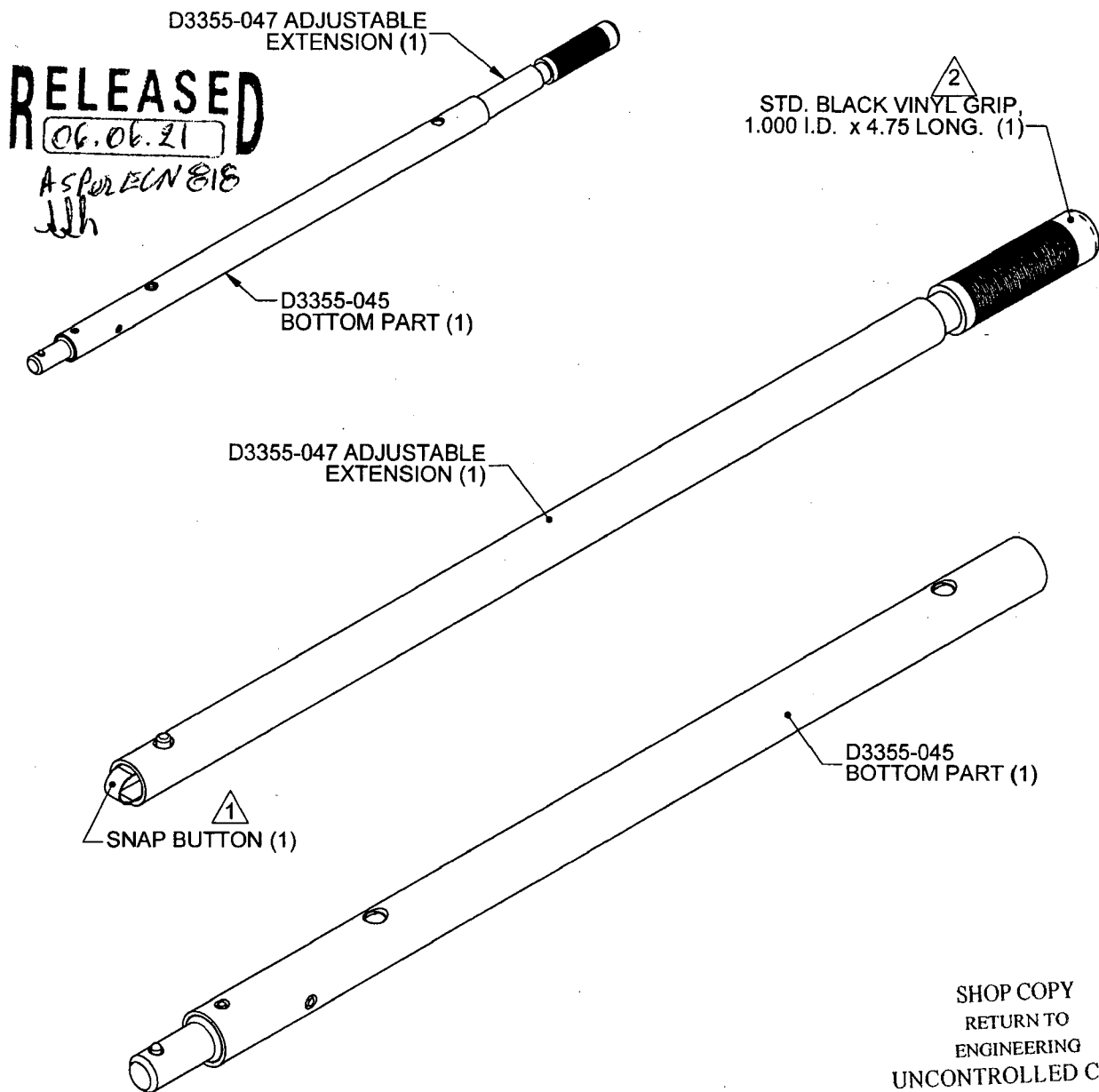
1000

1000

1000



DESIGN RF	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3355</b>	REV. B SHEET 1 OF 6
DATE <b>06.05.31</b>		TITLE <b>HANDLE WELDMENT</b>	SCALE 1:8
A	05.02.07	NEW ISSUE	
B	06.05.31	EDITED NOTE 1 (SHEET 2), UPDATE DETAIL B	



**D3355-041 HANDLE ASSEMBLY**

**NOTES:**

- 1) POSSIBLE SUPPLIER: REID TOOLS SUPPLY CO. P/N VA-2160
- 2) POSSIBLE SUPPLIER: REID TOOLS SUPPLY CO. P/N GP-1R

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **24900**

**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

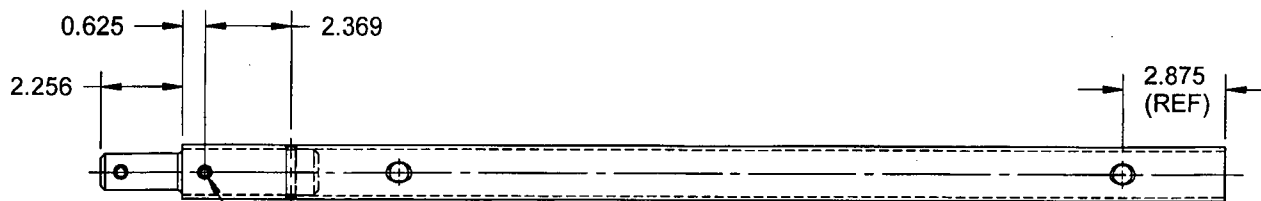
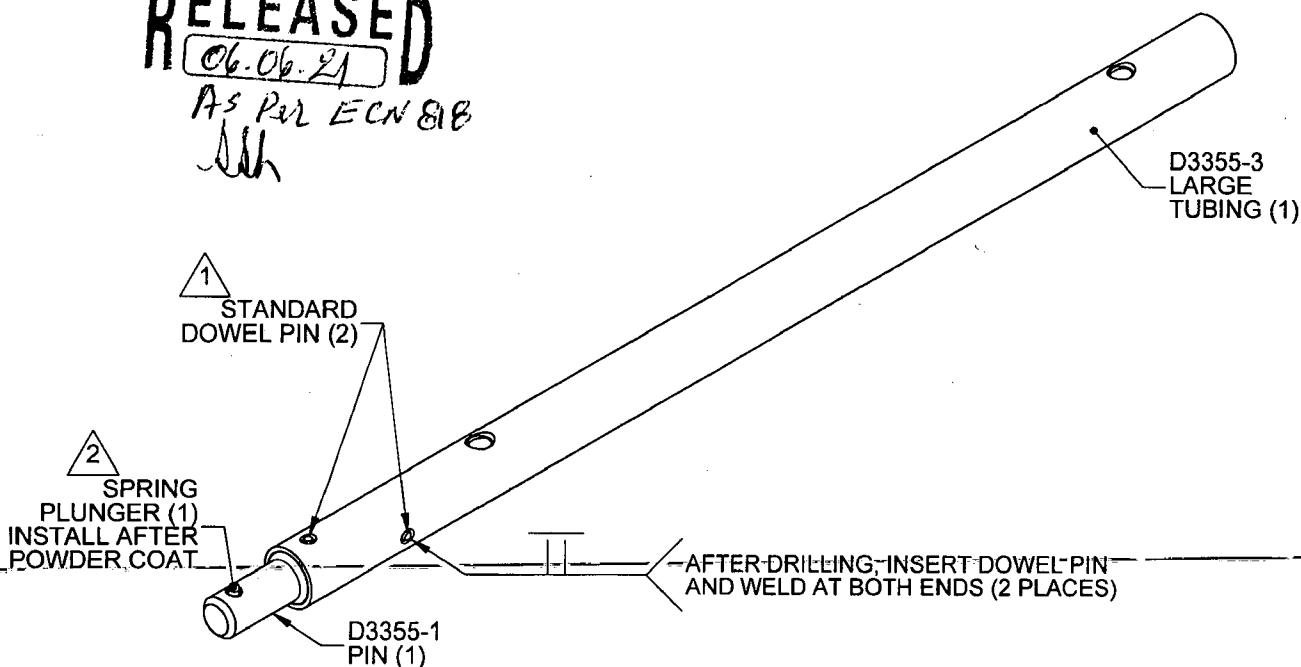
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



DESIGN RF	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3355</b>	REV. B SHEET 2 OF 6
DATE <b>06.05.31</b>	TITLE <b>HANDLE WELDMENT</b>		SCALE 1:5

**RELEASED**  
**06-06-21**

*AS PER ECN 818*  
*[Signature]*



DRILL 90° FROM EACH HOLES  
Ø 0.250 (DRILL THRU (2 PLACES) AND  
CHAMFER 0.06 x 45° (4 PLACES)

### **D3355-045 BOTTOM PART**

#### **NOTES:**

- 1) STEEL STANDARD GROUND DOWEL PIN, Ø 0.250 X 1.50 LONG  
POSSIBLE SUPPLIER: SPAENAUR, P/N 238-043
- 2) SPRING PLUNGER, POSSIBLE SUPPLIER: REID TOOLS SUPPLY CO. P/N VA-7130
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT PAINT FIRE RED (4.3.5.10) PER DART QSI 005.4.5
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) BREAK ALL SHARP EDGES 0.010 TO 0.020

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
*449100*

**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



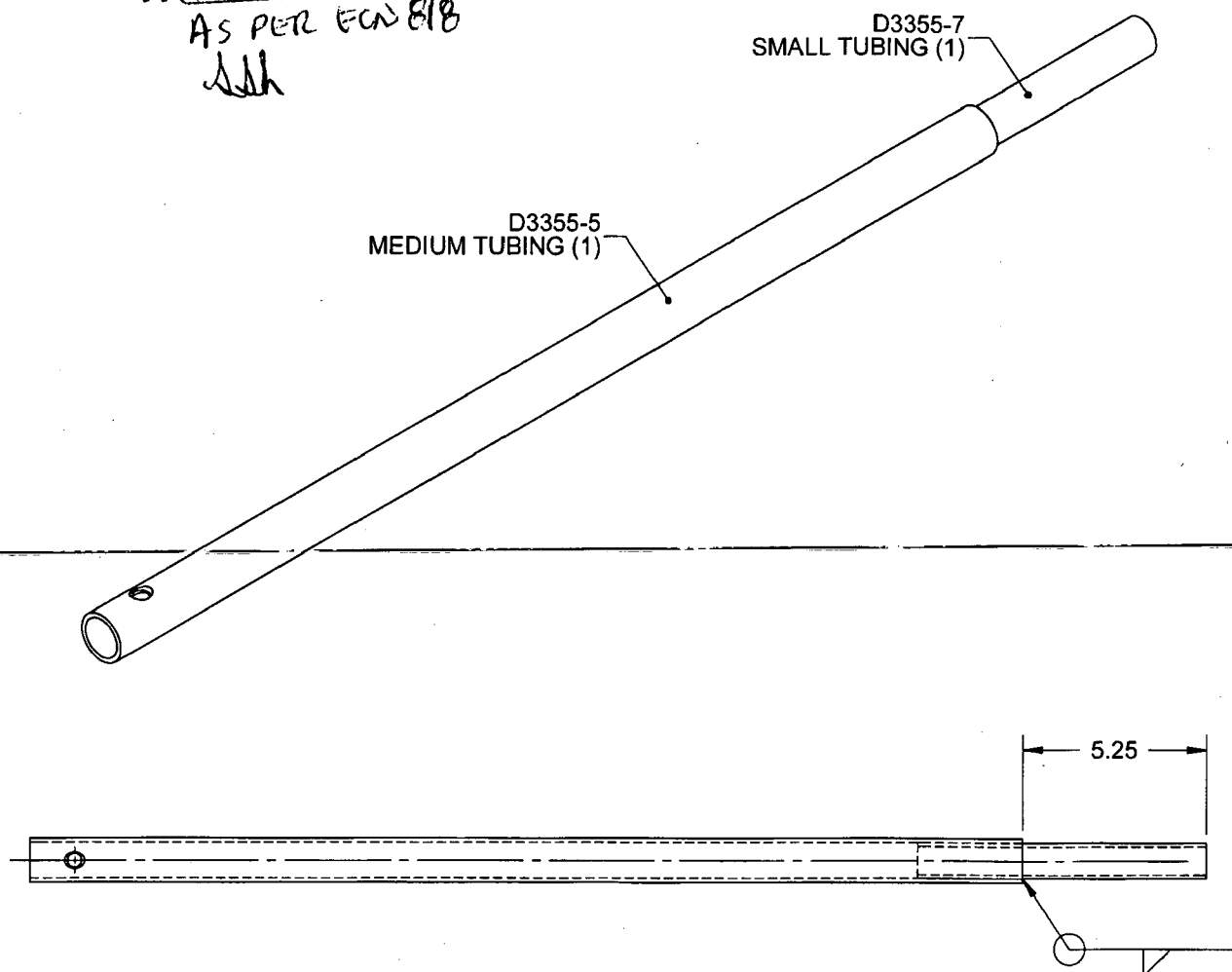


DESIGN RF	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3355</b>	REV. B SHEET 3 OF 6
DATE <b>06.05.31</b>	TITLE <b>HANDLE WELDMENT</b>		SCALE 1:5

**RELEASED**  
**06.06.21**

AS PER ECN 818

*ASH*



**D3355-047 ADJUSTABLE EXTENSION**

**NOTES:**

- 1) WELD PER DART QSI 004
- 2) FINISH: POWDER COAT PAINT FIRE RED (4.3.5.10) PER DART QSI 005.4.5
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.010 TO 0.020

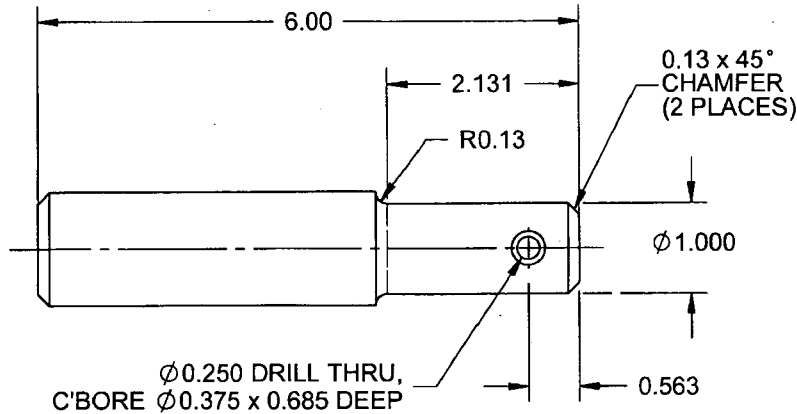
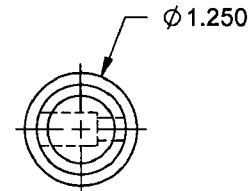
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 44900

**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

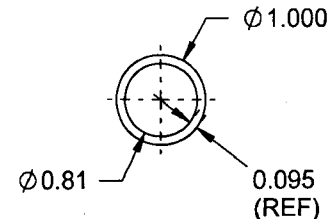
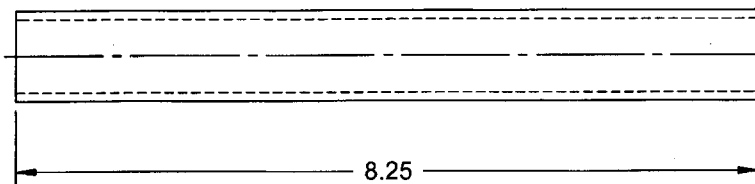
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**DART**

DESIGN RF	DRAWN BY CB	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3355</b>	REV. B SHEET 4 OF 6
DATE <b>06.05.31</b>	TITLE <b>HANDLE WELDMENT</b>		SCALE 1:2

**RELEASED**  
*06.06.21*  
*AS PER ECN 018***D3355-1 PIN****D3355-1 NOTES:**

- 1) MATERIAL: AISI-4130/ AISI-4140 OR ASTM A304-02/ A-434-BC/ A193-03 - GRADE-B7/ A29-03/ A322-91 OR UNS#-G41400 ROUND BAR, (REF. DART SPEC. M4140H-R)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020

**D3355-7 SMALL TUBING****D3355-7 NOTES:**

- 1) MATERIAL: AISI 1018-1025 MILD STEEL SEAMLESS ROUND TUBING (REF. DART SPEC. M1020TR1.000W.095)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010

SHOP COPY  
RETURN TO:  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *44900*

**COPYRIGHT © 2005 BY DART AEROSPACE LTD.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



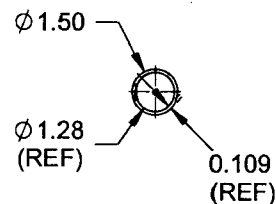
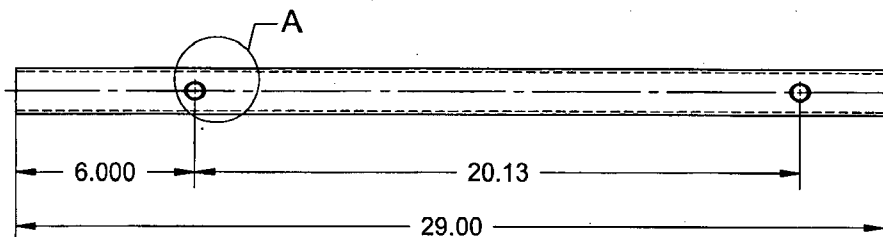
DESIGN RF	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3355	REV. B SHEET 5 OF 6
DATE 06.05.31	TITLE HANDLE WELDMENT		SCALE 1:6

**RELEASED**  
*06.06.21*  
*AS PER ECN 818*

CHAMFER  $\phi 0.687$  (11/16)  
x 45°, 0.060 DEEP  
(2 PLACES)

$\phi 0.531$  (17/32) DRILL  
THRU (2 PLACES)

DETAIL A  
SCALE 1 : 2



**D3355-3 LARGE TUBING**

**NOTES:**

- 1) MATERIAL: AISI 1018-1025 MILD STEEL SEAMLESS ROUND TUBING  
(REF. DART SPEC. M1020TR1.500W.109)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.015 TO 0.030

SHOP COPY  
RETURN TO  
ENGINEERING  
CONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *44900*

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

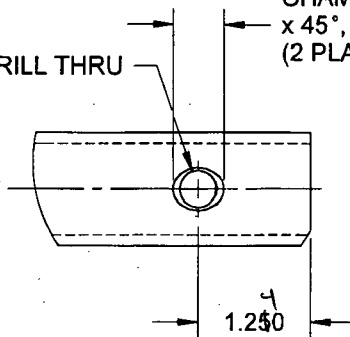


DESIGN RF	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED	DRAWING NO. D3355	REV. B SHEET 6 OF 6
DATE 06.05.31		TITLE HANDLE WELDMENT	SCALE 1:5

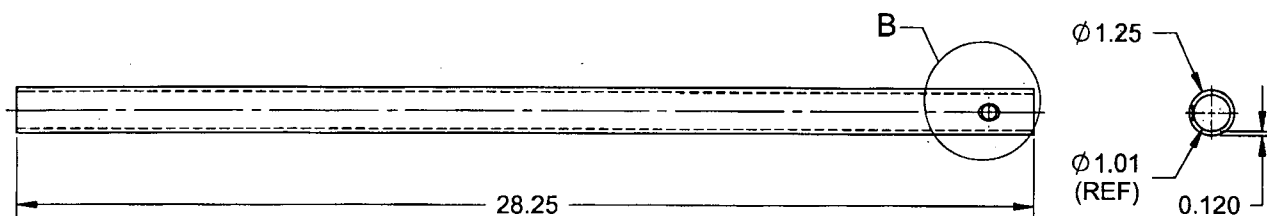
RELEASED  
[06.06.21]  
AS PER ECN 818  
*[Signature]*

CHAMFER  $\phi 0.563$  (9/16)  
x 45°, 0.060 DEEP  
(2 PLACES)

$\phi 0.406$  (13/32) DRILL THRU



DETAIL B  
SCALE 1:2 *1.047*



### D3355-5 MEDIUM TUBING

#### NOTES:

- 1) MATERIAL: AISI 1018-1025 MILD STEEL SEAMLESS ROUND TUBING  
(REF. DART SPEC. M1018TR1.250W.120)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.015 TO 0.030

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. *44900*

COPYRIGHT © 2005 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.